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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/845,336	05/01/2001	Toshiya Uemura	PW 280291 T36-131965M/KOH	2254
21254	7590	04/27/2005	EXAMINER	
MCGINN & GIBB, PLLC 8321 OLD COURTHOUSE ROAD SUITE 200 VIENNA, VA 22182-3817			SCHILLINGER, LAURA M	
			ART UNIT	PAPER NUMBER
			2813	

DATE MAILED: 04/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/845,336	UEMURA ET AL.	
	Examiner	Art Unit	
	Laura M. Schillinger	2813	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2005.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 8-14 and 20-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 15 and 16 is/are rejected.
- 7) ☒ Claim(s) 17-19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Shakuda ('533).

In reference to claim 1, Shakuda teaches a device comprising:

A semiconductor laminate portion including a light-emitting layer (Col.6, lines: 5-15); and

A reflection surface disposed so as to be opposite to a side surface of the semiconductor laminate portion, wherein the semiconductor laminate portion and the reflection surface are provided in one and the same chip (Col.6, lines: 14-21), and a predetermined distance is provided between the semiconductor laminate portion and the reflection surface (col.12, lines: 30-35).

In reference to claim 2, Shakuda teaches wherein the reflection surface reflects light from the side surface of the semiconductor laminate portion into a direction of an optical axis of the light-emitting device (Col.12, lines: 30-45).

Art Unit: 2813

In reference to claim 3, Shakuda teaches wherein a distance between the reflection surface and the side surface of the semiconductor laminate portion is in a range of from 0.1 to 10  $\mu\text{m}$  (col.12, lines: 30-3).

In reference to claim 4, Shakuda teaches wherein the reflection surface is made of a material which is the same as that of an n pad electrode (Col.12, lines: 10-40).

In reference to claim 5, Shakuda teaches wherein a portion of the n pad electrode opposite to the side surface of the semiconductor laminate portion forms a second reflection surface (Col.12, lines: 10-20).

In reference to claim 6, Shakuda teaches wherein the reflection surface is formed on an n-type semiconductor layer which is formed by etching a first depth, and the n pad electrode is formed on the n-type semiconductor layer which is formed by etching to be a second depth shallower than the first depth (Col.12, lines: 15-35).

In reference to claim 7, Shakuda teaches wherein the reflection surface is formed integrally with the n pad electrode (Col.12, lines: 10-40).

In reference to claim 15, Shakuda teaches wherein a distance between the reflection surface and the side surface of the semiconductor laminate portion is in a range of from 0.2 to 7  $\mu\text{m}$  (col.12, lines: 30-35).

Art Unit: 2813

In reference to claim 16, Shakuda teaches wherein a distance between the reflection surface and the side surface of the semiconductor laminate portion is in a range of from 0.3 to 5 $\mu$ m (col.12, lines: 30-35).

***Allowable Subject Matter***

Claims 17-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: s 17-19 contain allowable subject matter. Shakuda fails to teach the particulars of the reflection layer. However, Shibata et al ('998) teaches a reflection layer formed within a laminate portion (claim 17) and elevated higher than the light emitting layer (claim 18); however Shibata is not considered prior art due to Applicant's earlier filing date, therefore prior art does not anticipate Applicant's claimed limitations. Moreover, even in combination, Shakuda and Shibata fail to teach a curved reflection layer (claim 19) .

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura M. Schillinger whose telephone number is (571) 272-1697. The examiner can normally be reached on M-T, R-F 7:00-5:00.

Art Unit: 2813

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl W. Whitehead, Jr. can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Laura M Schillinger  
Primary Examiner  
Art Unit 2813

4/16/05